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Dairy Production

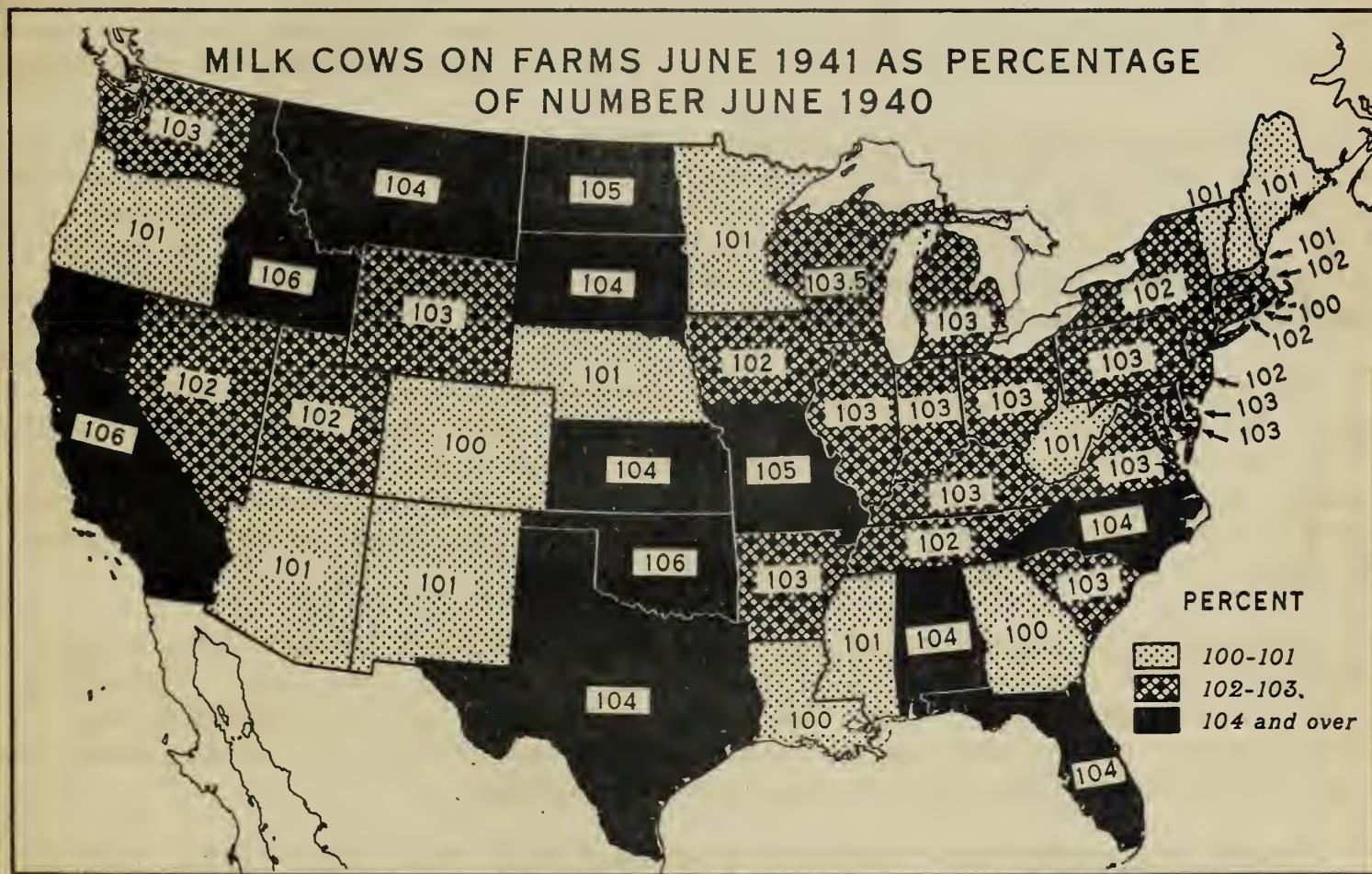
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AUGUST 15, 1941



U. S. DEPARTMENT OF AGRICULTURE

SINCE EARLY IN 1938 RECORD NUMBERS OF HEIFER CALVES HAVE BEEN RAISED FOR MILK COWS AND THE NUMBER OF MILK COWS IS NOW INCREASING IN NEARLY ALL STATES. ON JUNE 1 THE NUMBER OF MILK COWS ON FARMS WAS ABOUT 3 PERCENT ABOVE THE NUMBER AT THAT TIME LAST YEAR AND PRESENT INDICATIONS ARE THAT THE INCREASE DURING 1941 WILL BE ABOUT AS GREAT AS IN ANY OF THE LAST 30 YEARS EXCEPT IN THE 4-YEAR PERIOD FROM 1930 THROUGH 1933. SOME OF THE REASONS FOR THIS INCREASE ARE EXPLAINED ON PAGE 8.

DAIRY PRODUCTION SUMMARY

This probably begins a new chapter of dairy history in this country.

Prices received by farmers for milk and cream have risen substantially above their usual relation to feed costs. The butterfat-feed grain price ratio was higher last month than in any previous July for more than 30 years. It was as high as the 20 year average for October.

Farmers are feeding liberally. Those reporting on August 1 were feeding as much grain per cow as they ordinarily feed about mid-October.

Milk production per cow reported for August 1 was the highest for the date in the 17 years of record, not only for the United States as a whole, but for the North Atlantic, East North Central and Western groups of States. It was close to previous high records in the South. As compared with conditions on August 1 last year milk production per cow was nearly 5 percent higher, the number of milk cows was nearly 3 percent higher and daily milk production was between 7 and 8 percent higher. The seasonal decline in milk production between July and August 1 was about 10 percent, the smallest percentage decline that has been reported at that season.

Production seems likely to continue heavy for some time if prices are favorable, as now seems probable. The percentage of increase over average production may rise further in the late fall and winter months for liberal feeding may be more effective in retarding the usual seasonal decline than it could be in increasing production when pastures were in their prime. The shift towards fall freshening should also help to maintain winter and early spring production.

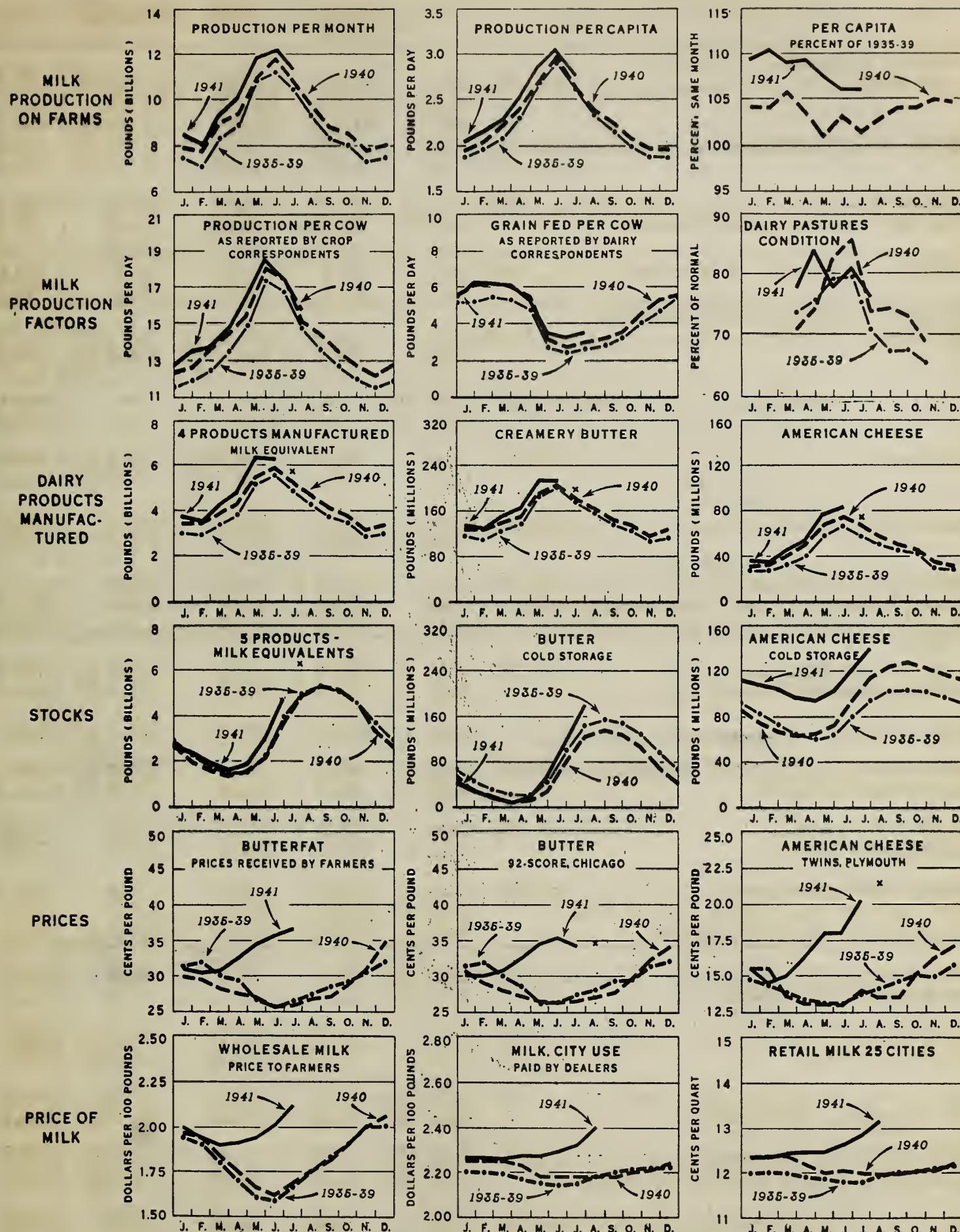
Milk production on farms in July is estimated at nearly 11.4 billion pounds. The increase over production in the same month last year was nearly 5 percent, somewhat more than in June but about the same as for the first half of the year. Daily milk production per capita, estimated at 2.76 pounds was nearly 4 percent above that for July 1929, the highest for the month in the dozen previous years for which data are available.

Production of manufactured dairy products continued through July at unprecedented levels for the season as in earlier months of this year. Comparing with the 1935-39 average for July the "milk equivalent" of the increases in creamery butter, cheese and canned milk combined was .9 billion pounds, about the same as the estimated increase in July milk production.

Stocks of manufactured products increased more than usual during July and on August 1 they were slightly larger than in 1938 and substantially larger than in other years. The large stocks reflect the increased production.

The prices of market milk and cheese increased sharply from July to August but there was little change in the price of butter. Normal relations between the prices of various dairy products are now much disturbed and may be expected to cause extensive regional shifts in manufacturing.

DAIRY PRODUCTION: GRAPHIC SUMMARY FOR THE UNITED STATES



* APPROXIMATION BASED ON INFORMATION AVAILABLE TO ABOUT 12TH OF CURRENT MONTH

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Dairy Production

August 15, 1941

SUMMARY OF DAIRY STATISTICS FOR THE UNITED STATES

		Average 1935-39	1940	1941	
				Total or average	Percent of 1940
MILK PRODUCTION ON FARMS					
Total, per month.....	mil. lb.	May	10,719	11,076	11,826 ^{a/}
		June	11,195	11,805	12,180 ^{b/}
		July	10,443	10,865	11,362 ^{a/}
Per capita, daily average.....	lb.	June	2.886	2.985	3.059 ^{a/}
		July	2.604	2.657	2.760 ^{a/}
Per cow, per day.....	lb.	June 1	17.35	18.03	18.55
(As reported by crop correspondents)		July 1	16.75	17.43	17.40
		Aug. 1	14.69	14.98	15.68
DAIRY PASTURES: Condition, % of normal.....	pct.	July 1	79.6	85.5	80.9
		Aug. 1	70.7	73.5	76.1
PRODUCTION OF MANUFACTURED DAIRY PRODUCTS					
Creamery butter, monthly.....	mil. lb.	June	198.7	205.4 ^{b/}	214.7 ^{b/}
		July	175.9	185.7 ^{b/}	197.6 ^{a/}
weekly.....	week ending	July 31	--	--	--
		Aug. 7	--	--	--
American cheese.....	mil. lb.	June	66.9	75.6 ^{b/}	83.1 ^{b/}
		July	57.9	66.7 ^{b/}	75.0 ^{a/}
Evaporated milk, case.....	mil. lb.	May	252.0	276.4	353.8
		June	261.5	295.7	374.2
4 products, milk equivalent.....	mil. lb.	May	5,235	5,533	6,325
(Creamery butter x 21, all cheese except skim x 10, canned cond. & evap. milk x 2.2)		June	5,602	5,911	6,282
		July	4,896	5,333	--
STOCKS ON HAND					
Butter in cold storage.....	mil. lb.	July 1	101.3	81.0	120.2 ^{b/}
(Including government holdings)		Aug. 1	143.0	123.6	178.5 ^{a/}
Commercial holdings, only.....		Aug. 1	132.8	122.8	177.7 ^{a/}
American cheese.....	mil. lb.	July 1	81.1	96.9	121.1 ^{b/}
(Cold storage holdings)		Aug. 1	95.4	116.8	138.9 ^{a/}
Evaporated milk, case.....	mil. lb.	June 1	206.9	287.8	173.8
(Manufacturers' stocks)		July 1	283.8	288.6	189.7
5 products, milk equivalent.....	mil. lb.	June 1	2,266	2,193	2,992
(Butter, all cheese, canned cond. & evap. milk plus cream in cold storage)		July 1	3,957	3,747	4,711
		Aug. 1	4,985	4,960	6,306 ^{c/}
PRICES					
Butterfat, per pound.....	ct.	June 15	25.6	25.6	35.7
(Prices received by farmers)		July 15	26.4	25.9	36.6
Butter, wholesale, per pound.....	ct.	July	27.27	26.48	34.34
(92 score, Chicago)		Aug.	28.06	27.00	34.75 ^{d/}
American cheese, wholesale, per pound.....	ct.	July 15	13.65	14.00	20.25
(Twins, Plymouth, Wisconsin)		Aug. 15	14.15	13.50	21.50 ^{d/}
Milk, wholesale, per 100 pounds.....	dol.	June 15	1.58	1.63	2.02 ^{b/}
(All purposes, prices received by farmers)		July 15	1.66	1.69	2.13 ^{a/}
Milk for city distribution, per 100 pounds...	dol.	July	2.15	2.18	2.32
(Prices paid by dealers, 3.5% basis)		Aug.	2.18	2.18	2.40
Milk, retail, delivered, per quart.....	ct.	July	11.82	12.02	12.84 ^{b/}
(Average, 25 markets)		Aug.	11.93	11.98	13.14 ^{a/}

a/ Preliminary.

b/ Preliminary revision.

c/ Forecast or interpolation.

d/ Price Aug. 14.

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MONTHLY MILK PRODUCTION ON FARMS, UNITED STATES
1935-39 Average, 1940 and 1941

Month	Monthly Total				Daily average per capita		
	Average		1941	Average	1941		
	1935-39	1940	1941	1940	1935-39	1940	1941
	Million pounds			Pct.		Pounds	
January	7,480	7,952	8,448	106	1.871	1.950	2.053
February	7,124	7,801	8,008	103	1.957	2.044	2.159
March	8,342	9,006	9,331	104	2.084	2.207	2.271
April	8,928	9,444	10,020	106	2.304	2.390	2.519
May	10,719	11,076	11,826	107	2.676	2.712	2.876
June	11,195	11,805	12,180	103	2.886	2.985	3.059
July	10,443	10,865	11,362	105	2.604	2.657	2.760
Jan.-July Incl.	64,231	67,949	71,175	104.7	2.343	2.422	2.532
August	9,330	9,812	--		2.325	2.398	--
September	8,338	8,880	--		2.145	2.241	--
October	7,992	8,510	--		1,989	2.077	--
November	7,303	7,845	--		1,876	1,977	--
December	7,516	8,076	--		1,868	1,968	--
Yearly Total	104,710	111,072			2.216	2.301	

Milk production per cow was relatively high in all parts of the country on August 1. Averages for major groups of States exceeded or approached previous high August 1 records, while in all but 2 of the 48 States production per cow exceeded the 1930-39 average for that date. Production in the South and West has been favored by unusually good pastures, while in those North Central and Northeastern States affected by drought farmers appear to have been using supplementary feeds liberally in response to unusually good prices for dairy products.

In the North Atlantic States production per cow averaged about 1 percent higher than on August 1 a year ago although pastures were not nearly so good. In the other 5 major areas production per cow showed increases of 5 to 6 percent from this time a year ago. In the Southern States east of the Mississippi River, milk production responded noticeably to the improved pasture that has followed the relief of the drought in this area. In Michigan production per cow appears to have been adversely influenced by short pastures, but in other important North Central dairy manufacturing States production per cow was substantially above the 10-year average for August 1. Likewise in the Western States production per cow continued unusually high.

For the country as a whole production per cow in herds kept by crop correspondents averaged 15.68 pounds on August 1, compared with 14.98 pounds on that date last year and a 1930-39 August 1 average of 14.14 pounds. The proportion of milk cows in production was below that for August 1 in any of the past 4 years but higher than reported for the date prior to 1937.

The condition of dairy pasture on August 1, 1941 averaged better than on that date in 8 of the past 11 years but was a little below the August 1 average in the 1920-29 period prior to recent droughts. Grazing conditions this year were especially good in the West and South. In other areas pastures were variable; for the most part providing considerable feed for milk cows but suffering severely from drought in parts of New England, northern New York, Michigan, and sections of the central Mississippi Valley and western edge of the Corn Belt.

The spotted condition of pastures in Northeastern fluid milk areas on August 1 this year contrasts sharply with the unusually good conditions there at that time a year ago. Dairy correspondents in the North Atlantic States reported milk cows obtaining only 65 percent of their feed from pasture on August 1 compared with 78 percent a year ago. Extremely poor pastures were reported from coastal areas of central and northern New England and from important dairy sections in northern New York. However, in New Jersey rather substantial improvement of pastures took place during July and recent rains have benefitted pastures in many other parts of the Northeast.

In the North Central States hot dry weather in late July caused rapid drying and browning of pastures. In much of Michigan, eastern Wisconsin, southern Missouri, and the eastern parts of South Dakota and Nebraska, pastures were suffering severely from drought with grass extremely short in local areas. Due to the accumulation of grass resulting from more favorable moisture conditions earlier this summer, pastures in most other States of this area were furnishing fair feed and west of the Mississippi were much better off than on August 1, 1940. Since the first of August rainfall in Minnesota, the northern half of Wisconsin, most of Michigan, eastern Kansas, and a few other local areas have materially benefitted pastures, but in most of the central Mississippi and Ohio Valleys dry, hot weather has caused further deterioration.

In the Southern States east of the Mississippi River July rains supplied ample moisture to revive pastures from the severe drought conditions apparent there in earlier months. In the South as a whole the condition on August 1 averaged the best for that date in any recent year except 1938. In the West, except for moderate declines in Washington and Oregon, the condition

of pastures changed but little from the unusually high figure a month earlier, and the August 1 average for the group was the highest for the date since 1923.

PERCENTAGE OF FEED OF MILK COWS OBTAINED FROM PASTURE ON AUGUST 1 AS REPORTED BY DAIRY CORRESPONDENTS, BY MAJOR GROUPS OF STATES, 1931-41.

<u>Date</u>	<u>North</u>	<u>E. North</u>	<u>W. North</u>	<u>South</u>	<u>South</u>	<u>United</u>	
	<u>Atlantic</u>	<u>Central</u>	<u>Central</u>	<u>Atlantic</u>	<u>Central</u>	<u>Western</u>	<u>States</u>
<u>August 1</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
1931-40 Av.	71.9	79.7	84.7	79.8	82.3	65.4	79.2
1940	78.4	82.7	87.1	75.1	83.3	65.2	81.2
1941	64.7	77.9	88.0	76.1	84.3	67.1	79.0

Milk cows were being supplied unusually liberal mid-summer allowances of concentrated feeds this year. On August 1 the quantity of grain and concentrates fed per milk cow in herds kept by dairy correspondents was 15 percent greater than on that date in any of the past 10 years and approached the rate of feeding usually reached in mid-October. Heavy feeding has been encouraged by unusually favorable relationships between prices of dairy products and feed costs. Mid-July prices of butterfat averaged the best since 1929 and were the highest in relation to July feed grain prices in more than 30 years. Despite recent advances, prices of commercial feedstuffs were still relatively low compared with prices of wholesale milk. The rate of grain feeding was reported unusually high in all parts of the country. On August 1 the average quantity fed per cow in various major groups of States ranged from a third to a half higher than the 1931-40 average for the date, and exceeded previous high records for August 1 in all regions except the West.

GRAIN FED PER MILK COW PER DAY ON AUGUST 1 IN HERDS KEPT BY DAIRY CORRESPONDENTS, BY MAJOR GROUPS OF STATES, 1931-41

<u>Date</u>	<u>North</u>	<u>E. North</u>	<u>W. North</u>	<u>South</u>	<u>South</u>	<u>United</u>	
	<u>Atlantic</u>	<u>Central</u>	<u>Central</u>	<u>Atlantic</u>	<u>Central</u>	<u>Western</u>	<u>States</u>
<u>August 1</u>	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>
1931-40 Av.	3.6	2.4	1.8	3.5	2.7	2.2	2.54
1940	3.9	2.8	2.3	4.3	3.0	3.1	2.98
1941	4.8	3.6	2.4	4.8	3.6	3.1	3.50

Although by no means keeping pace with dairy product prices the costs of concentrated feeds fed to milk cows have advanced moderately in recent months. The value per 100 pounds of grain and concentrates fed by dairy reporters advanced about a dime in the three months period ending August 1, and appears to have been about 20 cents higher than a year ago. Hay prices in mid-July, although down seasonally, were up about 8 percent from a year earlier with the sharpest increases apparent in New England and the Pacific Coast States.

VALUE PER 100 POUNDS OF GRAIN AND CONCENTRATES FED TO MILK COWS IN HERDS KEPT BY DAIRY CORRESPONDENTS, BY MAJOR GROUPS OF STATES, SPECIFIED DATES, 1940-41

<u>Date</u>	<u>North</u>	<u>E. North</u>	<u>W. North</u>	<u>South</u>	<u>South</u>	<u>United</u>	
	<u>Atlantic</u>	<u>Central</u>	<u>Central</u>	<u>Atlantic</u>	<u>Central</u>	<u>Western</u>	<u>States</u>
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
1940							
Feb. 1	1.79	1.29	1.13	1.66	1.46	1.44	1.39
Nov. 1	1.66	1.19	1.00	1.60	1.33	1.31	1.28
1941							
Feb. 1	1.78	1.33	1.08	1.66	1.41	1.38	1.38
May 1	1.76	1.36	1.13	1.73	1.43	1.43	1.41
Aug. 1	1.89	1.46	1.19	1.81	1.55	1.56	1.51

Milk Produced per Milk Cow in : Milk Cows on
 Herds kept by Reporters 1/ : Condition of Dairy Pastures 2/ : farms. Number
 State : August 1 : June 1941 as %
 : Av. 1930-39: 1940 : 1941 : Av. 1930-39: 1940 : 1941 : of June 1940 4/

		Pounds		Percent		Percent
Me.	15.1	17.2	18.9	81.6	39	65
N.H.	15.4	17.0	16.8	78.1	90	70
Vt.	14.5	17.1	16.6	82.0	93	73
Mass.	17.6	18.8	19.5	74.6	89	62
R.I.	3/	3/	3/	72.5	92	71
Conn.	17.7	18.5	17.7	75.5	90	86
N.Y.	17.3	18.4	18.6	67.6	91	53
N.J.	18.7	19.7	21.2	77.8	67	77
Pa.	17.0	18.0	18.5	68.2	83	71
N.Atl.	16.97	18.28	18.49	70.7	87.6	63.7
Ohio	16.2	16.7	17.4	65.6	79	73
Ind.	15.0	15.4	17.0	62.8	67	71
Ill.	14.5	15.5	16.4	63.5	61	76
Mich.	17.5	19.2	18.0	59.7	81	58
Wis.	17.0	18.1	19.3	61.1	79	72
E.N.Cent.	16.25	17.13	18.01	62.2	75.0	70.4
Minn.	15.1	15.3	16.1	60.6	62	80
Iowa	14.2	14.6	15.9	64.8	64	80
Mo.	10.9	12.3	13.0	56.4	62	65
N.Dak.	14.6	15.8	16.5	50.8	72	87
S.Dak.	12.1	12.9	13.1	44.7	53	70
Nebr.	14.0	14.3	15.2	53.9	39	78
Kans.	12.9	12.8	14.9	50.9	54	80
W.N.Cent.	13.49	14.13	14.97	57.2	59.3	77.8
Del.	3/	3/	3/	71.3	74	88
Md.	15.1	16.0	16.4	67.6	70	76
Va.	13.0	13.8	14.4	73.7	92	88
W.Va.	13.8	13.8	14.6	71.2	88	83
N.C.	12.8	13.7	14.5	75.5	77	89
S.C.	10.8	11.8	11.8	68.9	65	81
Ga.	9.4	10.3	10.2	72.2	82	85
Fla.	3/	3/	3/	79.6	84	86
S.Atl.	11.90	12.78	13.45	72.5	80.6	84.9
Ky.	13.0	13.6	14.4	69.2	78	84
Tenn.	11.8	11.9	12.4	71.1	81	74
Ala.	8.9	9.5	10.1	74.2	85	85
Miss.	8.2	7.8	8.5	73.9	83	83
Ark.	9.4	9.7	10.5	64.2	78	77
La.	3/	3/	3/	74.2	83	87
Okla.	11.0	12.4	12.6	52.5	70	83
Tex.	9.9	10.1	10.7	64.2	74	94
S.Cent.	10.24	10.63	11.20	66.0	77.3	84.4
Mont.	15.5	18.2	18.6	59.6	76	87
Idaho	19.0	20.2	20.2	76.6	81	95
Wyo.	14.8	16.4	16.8	67.3	76	96
Colo.	14.7	16.4	18.0	61.7	61	95
N.Mex.	3/	3/	3/	64.7	59	100
Ariz.	3/	3/	3/	79.6	64	91
Utah	3/	3/	3/	68.5	61	94
Nev.	3/	3/	3/	79.9	88	94
Wash.	19.8	19.1	20.2	73.1	57	86
Oreg.	17.7	18.4	19.7	74.6	67	85
Calif.	18.4	20.0	20.4	72.6	85	89
West.	16.86	18.30	19.31	71.0	72.6	89.8
U.S.	14.14	14.98	15.68	64.5	73.5	76.1

1/ Averages represent the reported daily milk production of herds kept by reporters divided by the total number of milk cows (in milk or dry) in these herds. Figures for New England States are based on combined returns from crop and special dairy reporters and are weighted by counties. Figures for other States, regions, and U.S. are based on returns from Crop Reporters only.

2/ State averages are based on reports by crop correspondents. For regional and U.S. averages the States are combined in proportion to the importance of pastures to dairy production on August 1.

3/ State averages omitted because of instability, but reports are included in arriving at regional averages.

4/ Based on reports for about 160,000 herds collected largely through cooperation with the Rural Mail Carriers.

THE INCREASE IN MILK COWS

The number of milk cows on farms increased nearly 3 percent between June 1940 and June 1941. A record number of yearling heifers is being raised for milk cows and both the recent survey of livestock numbers and present price conditions indicate that an even larger number of heifer calves will be saved for milk cows this year. With feed grain abundant, hay supplies very large, and prices of dairy products unusually high in comparison with feed costs, the percentage of milk cows culled from herds appears to have been reduced slightly. Thus present conditions are favorable for a relatively rapid expansion in the number of milk cows, and it is likely that numbers will increase for several years.

The tendency to increase milking herds appears to be general. The number of milk cows is larger than a year ago in all but 4 States and from 2.1 to 3.6 percent larger than a year ago in most sections of the country. As shown by the graph on the front cover, however, the rate of increase varies considerably between States. Compilation of the records of numbers of livestock on 158,000 farms on June 1, 1941, shows that, in addition to keeping nearly 3 percent more milk cows than a year ago, farmers were saving for additions to their milking herds 22.5 heifer calves per 100 milk cows on hand, compared with 22.1 at the same time last year 22.5 in 1939, 21.8 in 1938 and from 18.5 to 21.4 in the preceding 6 years. The number of calves reported per 100 cows was substantially above the 1930-39 average in most of the country but was below average in some of the northeastern States where drought conditions were serious during May and also in some States in the Southwest where farmers have tended to shift to beef cattle production.

The present tendency to raise more dairy heifers than usual is a normal response of farmers to the high price of cows relative to the prices of other things. Farmers usually increase cattle numbers when the price of cattle is high compared with the general level of prices. Numbers of cattle increased 3 to 7 percent per year around 1884, 1899, 1914 and from 1929 through 1933 or at intervals of about 15 years. In each case the prices of milk cows and other cattle were unduly increased relative to prices of other things during the early part of the building-up period and unfavorably affected by heavy marketings during the following liquidation. During the World War boom and the depression period, however, the effect of the cattle cycle on prices was obscured by changes in the general price level and the same may be true during the next few years.

Estimated numbers of the various classes of cattle on farms at the end of each year show that the ratio of heifer calves (being raised for milk cows) to milk cows has been closely related to the price of milk cows as a percentage of feed costs during the last half of each year. Taking for the cost of raising a calf the value at farm prices of 2 tons of hay, 1000 pounds feed grain and the butterfat in 750 pounds of 4 percent milk, the record for recent years shows as follows:

	Price of milk cows as percent of value of feed:		Calves per 100 cows at end of year	
	Range	Average	Range	Average
1928, 1929, 1938, 1939, 1940.....	184-195%	189.5%	:22.3-22.9:	22.6
1930, 1931, 1932, 1935, 1937.....	143-151%	146.5%	:21.4-21.9:	21.65
1933, 1936.....	111-113%	112%	:21.1-21.2:	21.15
1934.....		: 69%	: :	20.2

On July 15 the price that farmers received for milk cows was higher relative to the price of hay than in any previous month during the last 31 years for which monthly prices are available and about 74 percent above the July average during the period. The price of cows was also higher in comparison with the price of feed grain than in previous Julys except 1929, 1932, 1938 and 1939. So far as one can judge from responses to prices in the past, dairymen may be expected to raise about the maximum proportion of their heifer calves this season.

Although it seems obvious that the price of cows can hardly continue indefinitely at an abnormally high level, relative to the cost of production, there is no precise method of determining just when the turn will come. The present demand for dairy products is strong, but the extent to which the number of cows can be increased is dependent on pastures and on supplies of grain and roughage, and therefore on weather conditions and crop acreages. Four favorable seasons have followed the period of severe droughts and as long as conditions continue favorable the country can support more livestock than formerly. Crop yields per acre in 1941 are expected to be 18 percent above the 1923-32 or "pre-drought" average. On the other hand, numbers of sheep, hogs, hens and turkeys are being increased as are the numbers of beef and dairy cattle. In time this will mean increased competition for feed and pasture. Any shortage of feed or any weakness of prices of dairy products that would materially increase the number of cattle marketed would tend to make the price of cows less attractive to those raising heifer calves for sale. Demand and price conditions are difficult to foresee in these disturbed times but there is nothing to indicate that the "cow cycle" has ceased to function. And ordinarily the longer and steeper the climb to the crest, the farther and faster the descent.